

Exhibit 2

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April 5, 1999

(VIA FAX - ORIGINAL BY FIRST CLASS MAIL)

Brian M. Murtagh, Deputy Chief
Terrorism and Violent Crime Section
Criminal Division
United States Department of Justice
601 D Street, N.W., Room 6500
Washington, D.C. 20530

Re: United States v. Jeffrey R. MacDonald

Dear Mr. Murtagh:

This is in response to your letter of March 31, 1999, concerning the government's proposal to have the Laboratory Corporation of America's Forensic Identity Testing Laboratory ("Lab Corp.") designated as the independent laboratory to conduct the nuclear and mitochondrial DNA testing in this case.

We propose instead that either the Armed Forces Institute of Pathology ("AFIP") or the Forensic Science Services of Great Britain be chosen as the independent laboratory to conduct the DNA testing in this case. Both of these laboratories have far greater experience than Lab Corp. in performing mitochondrial DNA testing and dealing with difficult cases, and hence we feel that they are both much better suited to conduct the testing at issue in the MacDonald case.

The AFIP is our first choice to conduct the testing in this case, and for the following reasons, we urge the government to join us in recommending it to the Court.

1. The AFIP is a fully certified and accredited laboratory. According to James Canik, who is the AFIP's civilian lab administrator, the AFIP is certified by the following entities: (1) The American Society of Crime Laboratory Directors Accreditation Board; (2) The College of American Pathologists; and, (3) the Department of Defense Mitochondrial DNA Assurance

April 5, 1999

Page 2

Oversight Committee. The AFIP is located in Rockville, Maryland, which is geographically closer to the lawyers and the experts in this case than Lab Corp's facility in North Carolina, which would reduce travel expenses and time spent on travel for both the experts and the lawyers.

2. The AFIP performs both mitochondrial and nuclear DNA (STR) testing, and the scope of its mitochondrial testing is not restricted to the testing of bone specimens, but also includes hairs. Mr. Canik informs me that he sees no reason why the AFIP would not give approval to conduct the requisite testing in the MacDonald case.

3. There is little question that the AFIP is the most experienced laboratory in the world when it comes to performing mitochondrial DNA testing on old evidence, particularly samples obtained from exhumations, and is clearly a superior laboratory in this regard when compared to Lab Corp. As Barry Scheck mentioned to you, we have no doubt that your own DNA experts at the FBI would agree that the AFIP has superior experience in performing mitochondrial DNA testing. As the premiere military laboratory, the AFIP is entrusted with the important task of identifying our war dead, as well as answering other important questions of identification that arise in the course of military investigations. The AFIP has been at the forefront of mitochondrial DNA testing and has been using this technology since 1991. It routinely uses this technology in body identification cases, and as a result, it has unparalleled experience in working on difficult and complex cases that involve DNA extractions from old and degraded biological specimens. Mr. Canik has informed me that they are even working on identifying body remains from World War II, some of which involves extracting mitochondrial DNA from hair taken in 1927. The AFIP also has experience in dealing with various contamination problems that can arise in the course of such testing.

While I don't know the total number of cases in which Lab Corp. has performed mitochondrial DNA testing,¹ I would safely

¹ It is not clear to me from Dr. Eisenberg's curriculum vitae and the attached Record of Courtroom testimony what Lab Corp's experience is with mitochondrial DNA testing, i.e., how many mitochondrial DNA cases Lab Corp. has actually worked on. The Record of Courtroom testimony indicates that Lab Corp's experts provided testimony on mitochondrial DNA testing in only two cases in 1998, and that this testimony was given at admissibility hearings, and not in a trial setting. The chart

April 5, 1999

Page 3

wager that it is well below the number of mitochondrial exams conducted by the AFIP. Mr. Canik told me that in 1997 alone, the AFIP conducted mitochondrial DNA testing in 83 cases involving body identifications, and that the testing in these cases involved 299 individual specimens. He also told me that the AFIP performed mitochondrial DNA examinations in 345 family reference cases in 1997.²

Further, Mr. Canik informs me that the AFIP has 36 people working in their mitochondrial DNA unit, and 8 people in their nuclear DNA unit. According to Mr. Canik, the average case at the AFIP involves the typing of four skeletal elements and is processed in four weeks. In contrast, I understand that Lab Corp. does not have as large a staff, and that its turnaround time for issuing test results averages three to four months.

Hence, in terms of experience with old and degraded samples, intra-family differentiation, and turn-around time, the AFIP has real advantages when compared to Lab Corp.

4. While the AFIP does not permit open access by outside experts to its DNA testing facilities due to contamination concerns, Mr. Canik has informed me that the AFIP will permit qualified experts to observe certain procedures conducted by the AFIP DNA lab, and he has indicated that it would be possible for outside experts to observe procedures such as a DNA extraction so that they understand how the AFIP conducts these procedures. In addition, the AFIP would provide the detailed written protocols for its DNA testing procedures so that the government and defense experts can review them. Certainly as far as the defense experts are concerned, this is more than adequate access, and we believe that equal if not superior access would be granted to the FBI's DNA experts by its fellow government laboratory. We also feel certain that access at Lab Corp. would probably be no greater than that afforded by the AFIP, due to the same contamination concerns.

5. I don't know to what extent the AFIP has had any involvement in the MacDonald case in the past, other than serving

does not give any indication as to how many specimens were involved in these cases, nor does it indicate how many specimens Lab Corp. tests on an annual basis using mitochondrial technology.

² I am told that the figures for 1998 are in the process of being compiled for the AFIP's annual report.

as a repository for some of the autopsy evidence. However, if the AFIP conducted a review of the case or tested some of the biological evidence for the government on a previous occasion, it was not a factor at trial, and the AFIP has never conducted DNA testing in this case. Hence, it is our position that while the AFIP is a government laboratory, it qualifies as a independent lab, and if it did some testing in the past for the government, the defense waives any objection that it might have with respect to any claim that it lacks independence. We can't imagine that the prosecution would have any issues with respect to the AFIP's independence, as the AFIP has never done any testing for the defense.

6. Finally, we have serious reservations about using Lab Corp., which arise from information we have received about a pending murder case in Michigan (Michigan v. Kevin Holtzer) in which mitochondrial DNA testing conducted by Lab Corp. for the prosecution was beset by numerous problems according to Ray Beckering, the defense attorney in that case. Mr. Beckering has told me that after seven days of admissibility hearings, the trial court is in the process of determining whether Lab Corp's test results can be admitted at trial. While we don't yet know what the outcome in the Holtzer case will be vis-a-vis the admissibility of Lab Corp's results, we do not want to use a laboratory where there may be problems with its procedures and methodology, especially when the AFIP is available to do the testing.

Mr. Beckering provided me with the following illustrations of some of the problems he claims were associated with Lab Corp's mitochondrial DNA testing in the Holtzer case.

First, Mr. Beckering has told me that in presenting its internal validation of the testing it did in the Holtzer case, Lab Corp. revealed that it had included in its internal validation study the results of the very tests at issue in the Holtzer case. This fundamental error, while not raising questions about the underlying technology itself, potentially raises a very serious question about whether Lab Corp's procedures are scientifically sound.

Second, Mr. Beckering informed me that there were numerous contamination problems. He indicated that in eight separate tests conducted by Lab Corp., the control tests (referred to as "blanks") revealed contamination in all eight tests, and that the sequences exhibited five separate types of contamination. Mr. Beckering further noted that in some instances, Lab Corp. ended up sequencing only the contamination as opposed to the actual

item itself.

We feel that the validation and contamination problems that are claimed to have arisen in the Holtzer case are serious enough that Lab Corp. should not be chosen as the independent laboratory in the MacDonald case. In Holtzer, it may well turn out that the trial judge admits Lab Corp's test results into evidence and that the criticisms are unfounded. Nonetheless, even assuming that the claims are unfounded, the AFIP would still be a better choice in this case because of its vast experience in conducting mitochondrial DNA testing in old cases and the fact that it is a government laboratory that is entrusted with some of the most important uses of this technology.

* * *

Among knowledgeable experts, the general consensus is that the top three forensic mitochondrial DNA laboratories in the United States are the AFIP, the FBI Laboratory and Dr. Melton's laboratory. With the FBI and Dr. Melton excluded from conducting the testing in this case, we believe that the clear choice is the AFIP. The case at hand is one in which both the government and the defense have a mutual interest in making sure that the testing is conducted by the most qualified and experienced laboratory available so that the test results are reliable and accurate, and so that the parties, the Court and the public have confidence in the results. The testing in this case must be done correctly, and to the extent that only one destructive test can be conducted on a given item, we must assure ourselves that the tests are conducted by the most experienced independent laboratory available. I'm sure you agree that we do not want to end up in a situation where mistakes require that the tests be repeated, or where mistakes render a result for a given item irrelevant because the test cannot be repeated due to the fact that the questioned sample has been entirely consumed.

While the rates charged by the AFIP for mitochondrial DNA testing and nuclear STR testing are higher than those charged by Lab Corp.,³ we believe that the cost of the tests should not be the deciding factor in choosing a laboratory when it seems clear to us that the AFIP is by far the better choice in terms of proficiency and experience. Further, Mr. Canik has informed me that the AFIP gives a 20% discount for testing conducted on behalf of another government branch, so the price differential between the rates charged by the AFIP and Lab Corp. would be

³ See Attached Fee Schedule from the AFIP.

April 5, 1999
Page 6

minimal in this case. In addition, because this a case in which the Court is choosing the independent laboratory, and has indicated that it will provide for the initial payment of the lab's services, it may be possible for the Court to obtain an even greater discount.

Under the circumstances, we cannot understand why the government would not want the AFIP to conduct the testing in this case, and we urge the government to join us in recommending to the Court that the AFIP be appointed as the independent laboratory. If there is some reason why you think that the AFIP is disqualified from being designated as the independent laboratory in this case, please let us know so that we can better understand what the issues are.

After you've had a chance to review this, please give me a call so that Barry and I can discuss the choice of laboratory with you, since we have to respond to the Court on this issue by Wednesday.

Sincerely,



Philip G. Cormier

PGC/ps

cc: Barry C. Scheck, Esq.
Andrew Good, Esq.
Harvey A. Silverglate, Esq.
Wade M. Smith, Esq.
Melissa Hill, Esq.

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